

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Currently amended) ~~The~~ A TDMA radio communication system ~~according to claim 1,~~
that uses a multiple subcarrier modulation method, comprising:

at least a first and a second radio station, wherein said first radio station carries out
communications by selecting and then modulating only a subcarrier with which a desired transfer
rate can be obtained in said second radio station, wherein

said second radio station ~~comprises~~ includes:

a power detection ~~means for~~ unit detecting ~~the~~ a received power for each subcarrier and
detecting ~~the~~ an interference power from another radio station with which said second radio
station is communicating; and

a notification ~~means for~~ unit notifying said first radio station of information regarding said
received power and said interference power detected by said power detection means unit, and
wherein

said first radio station ~~comprises~~ includes:

a subcarrier selection ~~means for~~ unit selecting, based on a reception state and an
interference state of each subcarrier that have been returned from said second radio station, only
a subcarrier with which a desired transmission rate can be achieved in said second radio station,
wherein only the subcarrier that has been selected by said subcarrier selection ~~means~~ unit is
selected and modulated for communication.

3. (Currently amended) The TDMA radio communication system according to claim 2,
wherein said power detection ~~means~~ unit ~~comprises~~ comprising an interference power
determination ~~means~~ unit, a memory ~~means~~ unit, and a calculation ~~means~~ unit, wherein said first

radio station is grouped with other first radio stations that provide interference in a communication area of said first radio station, wherein said interference power determination ~~means-unit~~ extracts or calculates, upon transmission of a notification signal from each of said grouped first radio stations one by one successively, an interference power state for each subcarrier of said second radio station, wherein the ~~evaluated~~-calculated value is stored in said memory ~~means-unit~~, and wherein said calculation ~~means-unit~~ calculates a ratio of a desired wave power to an interference power for each subcarrier.

4. (Currently amended) The TDMA radio communication system according to claim 2, wherein said power detection ~~means-unit~~ comprises an interference power measuring ~~means-unit~~ and a calculation ~~means-unit~~, wherein said first radio station is grouped with other first radio stations that provide interference within a communication area of said first radio station, wherein each of said grouped first radio stations transmits a notification signal at the same time, wherein said interference power measuring ~~means-unit~~ measures, upon termination of the transmission from said first radio stations one by one successively and periodically in a cyclic manner, the interference power of said first radio stations other than said first station with which said second radio station is communicating, for each subcarrier, and wherein said calculation ~~means-unit~~ calculates a ratio of a desired wave power to an interference power for each subcarrier.

5. (Currently amended) A ~~second radio station in a~~ TDMA radio communication system that uses a multiple subcarrier modulation method, ~~and that comprises~~ comprising at least a first radio station and ~~said a~~ second radio station, ~~in which system~~ wherein said first radio station conducts communications by selectively modulating a subcarrier with which a desired transfer rate can be obtained in said second radio station, wherein said second radio station ~~comprising~~ includes:

a power detection ~~means-for~~ unit detecting a received power for each subcarrier ~~and an interference power~~ from a radio station other than said first radio station with which said second radio station is communicating, for each subcarrier; ~~and~~

a notification ~~means for~~unit notifying said first radio station of information regarding said received power ~~and said interference power~~ detected by said power detection ~~means~~unit; and

a subcarrier selection unit selecting, based on the information regarding said received power of each subcarrier that have been returned from said second radio station, only a subcarrier with which a desired transmission rate can be achieved in said second radio station, wherein only the subcarrier that has been selected by said subcarrier selection unit is selected and modulated for communication.

6. (Withdrawn) A first radio station in a TDMA radio communication system that uses a multiple subcarrier modulation method and that comprises at least said first radio station and a second radio station, in which system said first radio station conducts communications by selectively modulating a subcarrier with which a desired transfer rate can be obtained in said second radio station, said first radio station comprising:

a subcarrier selection means for selecting, based on a reception state and an interference state for each subcarrier returned from said second radio station, a subcarrier with which a desired transmission rate can be achieved in said second radio station; and

a switch means for turning on and off of modulation on a subcarrier basis.

7. (Withdrawn) The TDMA radio communication system according to claim 2, wherein said second radio station comprises a comparison means for determining a ratio of the received power of said first radio station as a current control station to that of another first radio station, said second radio station further provided with a soft handoff function whereby, if the value of the ratio determined by said comparison means drops below a predetermined threshold value, the management of said second radio station is transferred from the current first radio station to a next first radio station, wherein

said soft handoff function determines, for each subcarrier, if a value detected by a detection means provided in said second radio station for detecting the received power of the

current first radio station and the next first radio station base station, and the interference power from another station for each subcarrier corresponds to:

Condition 1: The value of $C/(N+I)$ of said current first radio station is larger than the value of $C/(N+I)$ of said next first radio station;

Condition 2: The value of $C/(N+I)$ of said next first radio station is larger than the value of $C/(N+I)$ of said current first radio station; or

Condition 3: $C/(N+I)$ is equal for both said current first radio station and said next first radio station,

said soft handoff function carrying out a handoff control based on the result of the determination, where C is received power, N is noise power, and I is interference power.

8. (Withdrawn) The TDMA radio communication system according to claim 7, wherein the handoff control based on the result of said determination is carried out mainly by said current first radio station if the sum of the number of subcarriers of said Conditions 1 and 3 is larger than the number of subcarriers of said Condition 2, and mainly by said next first radio station if the sum of subcarriers of said Conditions 2 and 3 is larger than the number of subcarriers of said Condition 1.

9. (Withdrawn) A TDMA radio communication system utilizing a multiple subcarrier modulation method and comprising at least a first and a second radio station, wherein

said second radio station detects such a frequency band on a subcarrier basis in a time slot of a notification signal transmitted by said first radio station that the power of a desired wave is greater than a sum of the power of an interference wave and that of noise by a predetermined value, and

said first radio station modulates only the subcarrier of the frequency band detected by said second radio station and then communicates with said second radio station.

10. (Withdrawn) A TDMA radio communication system utilizing a multiple subcarrier modulation method and comprising at least a first and a second radio station, wherein

said second radio station detects a frequency band on a subcarrier basis that exists in frequency bands in a time slot in a notification signal transmitted by said first radio station, said frequency band with which the power of the a desired wave (C) exceeds a predetermined value such that it can be used commonly by all of the time slots, with respect to a sum (N+I) of the total interference power and noise (N), wherein the power of a desired wave (C) and the power of an interference wave (I) from an interference station as the object of interference are determined from the notification signal, wherein said first radio station modulates only the subcarrier of the frequency band detected by said second radio station and then communicates with said second radio station.

11. (New) A communication method wherein a first communication destination carries out communications by selecting and then modulating only a subcarrier with which a desired transfer rate can be obtained in a second communication destination, wherein the communication method includes the following steps:

detecting a received power for each subcarrier and detecting a interference power from another communication destination with which said second communication destination is communicating;

notifying said first communication destination of information regarding said received power and said interference power detected; and

selecting, based on a reception state and an interference state of each subcarrier that have been returned from said second communication destination, only a subcarrier with which a desired transmission rate can be achieved in said second communication destination, wherein only the subcarrier that has been selected is selected and modulated for communication.